

December 19, 2000

Paul Peronard  
US EPA  
501 Mineral Avenue  
Libby, MT 59923

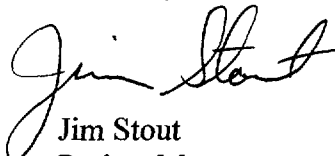
Re: **Addendums and Dividers for Approved Work Plan dated 28 July 2000**  
**Project No. 805169**

Dear Mr. Peronard:

Enclosed please find three sets of dividers and approved addenda numbers one (1) through eleven (11) which are ready to be inserted into your copies of the Approved Work Plan dated 28 July 2000. Please be advised that Addenda 7 and 8 do not exist.

Please call me with any questions at (303) 882-5271.

Sincerely,



Jim Stout  
Project Manager

JS/nm

cc: Paul Peronard, Denver office  
Jon Constan, MDEQ  
Karen Brown, WR Grace  
Ken Lund, Holme, Roberts, and Owens  
File Libby  
Nansie McLain, URS Denver

<b>URS</b>	
Project No.	805169
File Code No.	1.3.6.1
Doc No.	805169

## ADDENDUM NO. 1

### Work Plan – Removal of Asbestos and Vermiculite at the Libby Asbestos Site

28 July 2000

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend the sequence of performing cleaning activities for the Planer Shop, while maintaining the safety of the public and contractor personnel.

On 1 August 2000, the EPA, Millwork West and WR Grace reached an agreement that the planing operations can be immediately shut down until September 4, 2000. This enables an early start on the cleaning of the planer shop, shed, and planer provided that the building (shop and shed) be prepared and isolated as a restricted zone from all other parts of the property and public use and access.

URS proposes to accomplish this in strict adherence to the Work Plan Health and Safety procedures, Air Monitoring procedures and documentation reporting to assure the EPA that the early start in cleaning operations were performed in a manner protecting the public and allowing Millwork West to continue other site operations until relocated to the new temporary pole barn structures (Section 2.1.6 of the Work Plan) off Highway 2 scheduled for installation completion 1 September 2000.

To accomplish the cleaning, URS and its subcontractors ACandS and Koch Environmental Health, Inc. (KEH) will isolate the planer shop and shed from all other site areas and activities by installing critical barriers at all openings of the planer shop and shed per the building cleanup/decontamination procedures (Appendix D, Section 3.5). The personnel decontamination unit (Appendix D, Section 2.1) will be constructed and personnel access and egress will be restricted to this one entrance. Street clothes will be doffed and donned in the clean room.

The building exterior walls will become the boundary of an isolated restricted zone in the western portion of the site (Figure 2.1). This will not restrict Millwork West's utilization of access roads or other property areas.

In accordance with Appendix A (Sampling and Analysis Plan), KEH will implement for the Planer Shop cleanup operations, appropriate removal area and monitoring point (i.e., clean

rooms, exhaust fans, etc.) sampling activities. ACandS and KEH will also monitor personnel per the Health and Safety Plan.

Upon completion of cleaning, all critical barriers will be left in place and the negative air machines (Appendix D, Section 3.7) will be left in operation. Final clearance sampling will not be conducted (Appendix A, Section 2.3) until after exterior soils in the western area are removed and the EPA agrees that exterior operations should not result in recontamination with asbestos or vermiculite particles.

All materials removed will be bagged and/or contained in sealed containers per Appendix D and left on site for later removal after set-up of the full site exclusion zone. At that time per all other applicable procedures of the Work Plan, transportation for disposal would begin.

This early start on the planer and planer shop, in lieu of the small shed, enables WR Grace to proceed rapidly with work activities, assuring completion per the schedule limits, not adversely affecting the Millwork West retail business, and protects the health and safety of the public, agency, or contractor personnel.

Activities initiating containment will begin 4 August 2000. Complete cleaning of Planer, Planer Shop and shed internals are scheduled for 2 September 2000.

APPROVED  


<b>URS</b>	
Project No.	805769
File Code No.	1.8.5.1
Doc No.	pg 2/2



August 18, 2000

Mr. Paul Peronard  
US EPA  
EPR-SA  
999 18th St, Suite 500  
Denver, CO 80202

Mr. Paul Peronard  
US EPA  
501 Mineral Avenue  
Libby, Montana 59923

Re: **Addendum 2 to Approved Work Plan dated July 28, 2000**  
**Libby Asbestos Site (#8-BC), Libby, Lincoln County, Montana**

Dear Mr. Peronard:

Please find attached, for your review and approval, Addendum No. 2, revising Section 4, Implementation Schedule in the above referenced work plan.

Thank you in advance for your immediate attention with this matter. Please call if you have any questions concerning this submittal.

Sincerely,

Jim Stout  
Project Coordinator  
Libby Asbestos Site

cc: Jon Constan, Montana Department of Environmental Quality (3 copies)  
Ken Lund, Holme Roberts & Owen  
Bob Mariam, WR Grace  
David Cleary, WR Grace  
Karen Brown, WR Grace  
Matthew Cohn, US EPA

*Awaiting Signed Approval*

<b>URS</b>	
Project No.	805169
File Code No.	1.3.5.6
Doc No.	1/2 1/4

<b>URS</b>	
Project No.	805169
File Code No.	1.3.b.6
Doc No.	2/4

**ADDENDUM NO. 2**  
**Work Plan – Removal of Asbestos and Vermiculite**  
**at the Export Plant, Libby Asbestos Site**  
**28 July 2000**

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend the implementation schedule and sequence of performing activities. See Section 4.0 and the schedule, Figure 4.1.

On 11 August 2000, the EPA, Millwork West and WR Grace reached an agreement on the relocation of Millwork West's retail business to temporary pole barn structure(s) at a site in Libby, Montana.

Due to the extended negotiation period to reach agreement with Millwork West involving review and rejection of six locations and arrangements of the buildings on specific sites, project delays have been encountered.

The most significant delay is the ordering and delivery of the temporary pole buildings. Design of the structures had to be postponed until agreement. This impact has delayed erection of both buildings to September 23, 2000, and a final movement of retail materials to September 30, 2000.

To offset these delays, both the planer building and small shed will be cleaned under controlled conditions prior to September 25. This is reflected in the revised schedule (attached).

However, the installation of the decon pad, site enclosure restriction fencing, pole building cleaning and soil excavation is postponed, and these control the remaining schedule. Completion of surface excavation and transportation to the mine is now forecasted for November 25, 2000. This delay has moved activities into the winter season at the location.

Building cleaning can be accomplished by utilizing heaters, as necessary. Soil excavation, removal and transport to the mine may be accomplished completely if severe weather and snow do not make transportation and excavation operations unsafe at the export plant, over Rainy Creek Road or at the mine. Restoration completion at the export plant, final hydroseeding and restoration of the final grading and seeding/planting at the mine is not feasible during the winter season.

The attached revised schedule reflects restoration upon return of favorable seasonal conditions in April and completion on May 12, 2001. Actual work is performed in the allotted 20 weeks, however, a winter shutdown is required and shown in the schedule.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Signer

**URS**

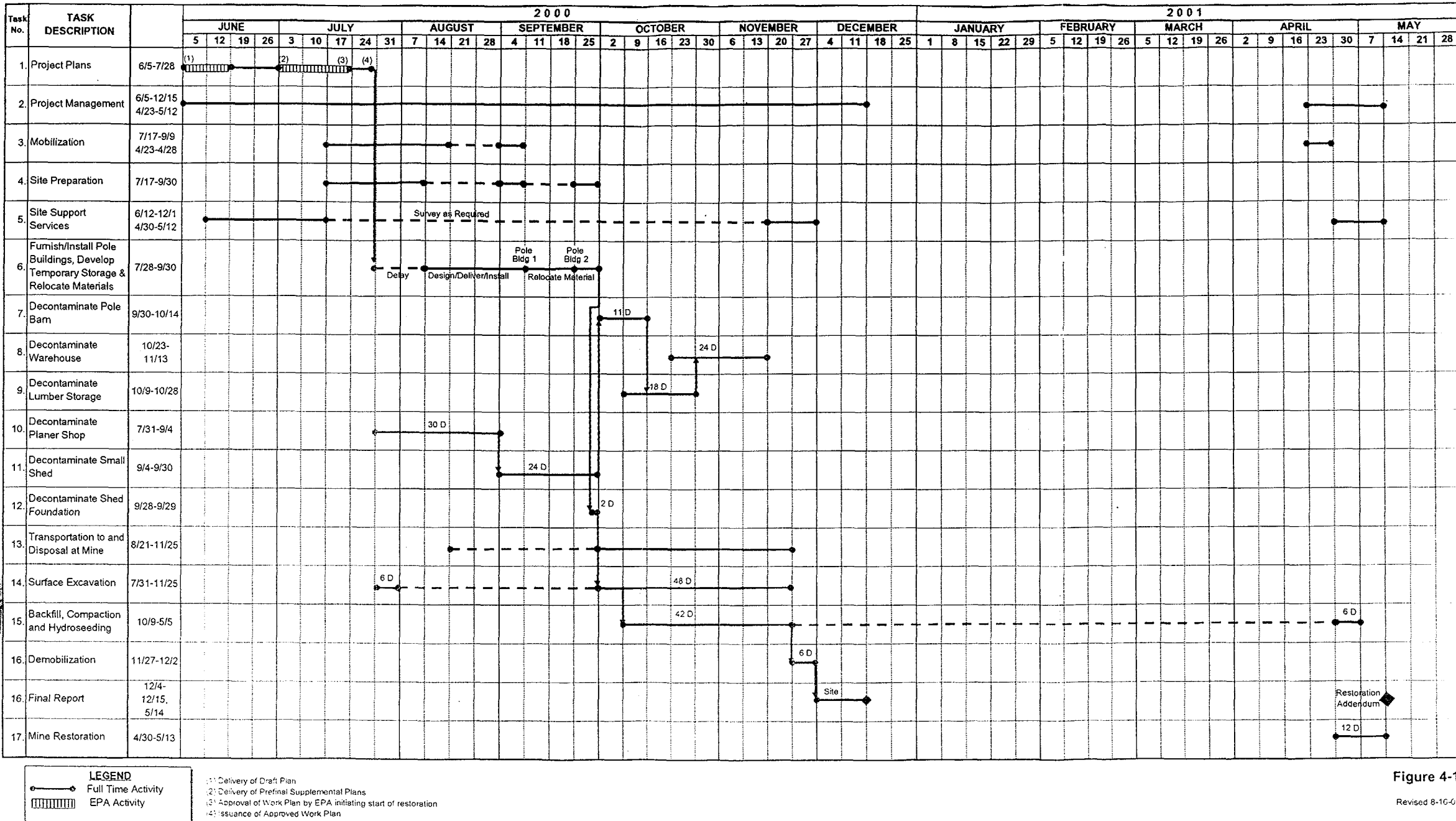
Project No. 805169

File Code No. 1.3.5.6

Doc No. 314

**Implementation Schedule for Removal Activities - Removal of Asbestos and Vermiculite at the Export Plant, Libby Asbestos Site**

The actual full time allocation required is 20 weeks from the date of approval of Work Plan through completion of site backfill/grading. The overall 20 weeks of removal action requirements allows for potential weather delays and other unknowns for which no float time has been included in this schedule.



**Figure 4-1**

Revised 8-16-05

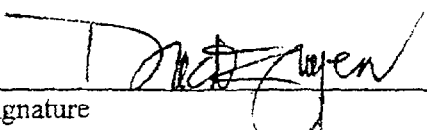
**ADDENDUM NO. 3**  
**Work Plan - Removal of Asbestos and Vermiculite**  
**at the Export Plant, Libby Asbestos Site**  
**18 August 2000**

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend the sequence of cleaning activities for the Planer Shop, while maintaining the safety of the public and contractor personnel.

To finish the cleaning of the Planer Shop, URS and its subcontractor AcandS will do the following:

1. After 5:00 p.m. on August 18, 2000, URS and AcandS employees, in full PPE including respirators and Tyvek, will hand shovel and grub the Planer Shop foundation as needed for installation of a membrane to collect power wash overspray. The soil next to the Planer Shop foundation will be thoroughly wet to minimize dust prior to hand digging. Also, a source appearing to be vermiculite, leaking from the east wall of the Planer Shop, will be plugged and the loose material cleaned up prior to hand digging. *(All activities relating to No. 1 must be performed after 5:00 p.m. after August 18, 2000, if necessary.)*
2. Building materials that have been decontaminated from inside the Planer Shop will be taken outside of the proposed exclusion zone to a staging area near the URS decontamination trailer and covered, if necessary.
3. Bagged asbestos impacted materials, including used PPE, will be removed from inside the Planer Shop and staged in the bed of a 12 cubic yard dump truck parked on the west side of the Planer Shop and covered with a tarp until approved for disposal at the mine.

To the extent that URS is able to continue work on the removal action each day without interruption, we anticipate that the September 4, 2000 deadline for completion of Planer Shop decontamination can be met.

  
Signature  
  
DUC NGUYEN (OSC)  
Printed Name of Signer

8/25/00  
Date

<b>URS</b>	<b>ORIGINAL</b>
Project No.	805169
File Code No.	1.3.b.3
Doc No.	



**URS**Project No. 805169  
File Code No. 1.3.5.2  
Doc No. 2/3**ADDENDUM NO. 4****Work Plan – Removal of Asbestos and Vermiculite  
at the Export Plant, Libby Asbestos Site****28 July 2000**

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend the sequence of performing cleaning activities for the small shed, while maintaining the safety of the public and contractor personnel.

On 16 August 2000, the EPA and WR Grace reached an agreement that cleaning of the small shed may be initiated prior to full site enclosure and movement of Millwork West retail operation, providing that it will be prepared as an isolated and restricted zone from all other parts of the property and public use and access. This enables an early start on the cleaning of the small shed in an effort to complete building cleanup before severe winter weather.

URS proposes to accomplish this in strict adherence to the Work Plan Health and Safety procedures, Air Monitoring procedures and documentation reporting to assure the EPA that the early start in cleaning operations were performed in a manner protecting the public and allowing Millwork West to continue other site operations until relocated to the new temporary pole barn structures (Section 2.1.6 of the Work Plan) off Highway 2 scheduled for completion on 30 September 2000.

To accomplish the cleaning, URS and its subcontractors ACandS and Koch Environmental Health, Inc. (KEH) will isolate the small shed from all other site areas and activities by installing critical barriers at all openings of the small shed per the building cleanup/decontamination procedures (Appendix D, Section 3.5). The personnel decontamination unit (Appendix D, Section 2.1) will be constructed and personnel access and egress will be restricted to this one entrance. Street clothes will be doffed and donned in the clean room.

The building exterior walls will become the boundary of an isolated restricted zone in the western portion of the site (Figure 2.1). This will not restrict Millwork West's utilization of access roads or other property areas. The necessary exterior work will be accomplished as follows:

1. After 5:00 p.m. on the day(s) approved by the EPA, URS and ACandS employees, in full PPE including respirators and Tyvek®, will hand shovel and grub the small shed

**URS**

Project No. 805169

File Code No. 1.3.5.2

Doc No. 2/3

**ADDENDUM NO. 4****Work Plan – Removal of Asbestos and Vermiculite****at the Export Plant, Libby Asbestos Site****28 July 2000**

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend the sequence of performing cleaning activities for the small shed, while maintaining the safety of the public and contractor personnel.

On 16 August 2000, the EPA and WR Grace reached an agreement that cleaning of the small shed may be initiated prior to full site enclosure and movement of Millwork West retail operation, providing that it will be prepared as an isolated and restricted zone from all other parts of the property and public use and access. This enables an early start on the cleaning of the small shed in an effort to complete building cleanup before severe winter weather.

URS proposes to accomplish this in strict adherence to the Work Plan Health and Safety procedures, Air Monitoring procedures and documentation reporting to assure the EPA that the early start in cleaning operations were performed in a manner protecting the public and allowing Millwork West to continue other site operations until relocated to the new temporary pole barn structures (Section 2.1.6 of the Work Plan) off Highway 2 scheduled for completion on 30 September 2000.

To accomplish the cleaning, URS and its subcontractors ACandS and Koch Environmental Health, Inc. (KEH) will isolate the small shed from all other site areas and activities by installing critical barriers at all openings of the small shed per the building cleanup/decontamination procedures (Appendix D, Section 3.5). The personnel decontamination unit (Appendix D, Section 2.1) will be constructed and personnel access and egress will be restricted to this one entrance. Street clothes will be doffed and donned in the clean room.

The building exterior walls will become the boundary of an isolated restricted zone in the western portion of the site (Figure 2.1). This will not restrict Millwork West's utilization of access roads or other property areas. The necessary exterior work will be accomplished as follows:

1. After 5:00 p.m. on the day(s) approved by the EPA, URS and ACandS employees, in full PPE including respirators and Tyvek®, will hand shovel and grub the small shed

foundation as needed for installation of a membrane to collect power wash overspray. The soil next to the small shed foundation will be thoroughly wet to minimize dust prior to hand digging.

2. Bagged asbestos impacted materials, including used PPE, will be removed from inside the small shed and staged in the bed of a 12-cubic yard dump truck parked on the west side of the property and covered with a tarp until approved for disposal at the mine.

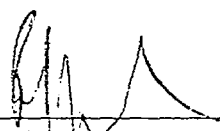
In accordance with Appendix A (Sampling and Analysis Plan), KEH will implement for the small shed cleanup operations, appropriate removal area and monitoring point (i.e., clean rooms, exhaust fans, etc.) sampling activities. ACandS and KEH will also monitor personnel per the Health and Safety Plan.

Upon completion of cleaning, all critical barriers will be left in place and the negative air machines (Appendix D, Section 3.7) will be left in operation. Final clearance sampling will not be conducted (Appendix A, Section 2.3) until after exterior soils in the immediate area are removed and the EPA agrees that exterior operations should not result in recontamination with asbestos or vermiculite particles.

All materials removed will be bagged and/or contained in sealed containers per Appendix D and left on site for later removal after set-up of the full site exclusion zone. At that time per all other applicable procedures of the Work Plan, transportation for disposal would begin.

This early start on the small shed enables WR Grace to proceed rapidly with work activities, assuring completion per the revised schedule limits, not adversely affecting the Millwork West retail business, and protects the health and safety of the public, agency, or contractor personnel.

Activities initiating containment will begin as soon as possible. Complete cleaning of small shed internals is scheduled for 30 September 2000.

  
\_\_\_\_\_  
Signature  
PAUL R. PERONARD  
\_\_\_\_\_  
Printed Name of Signer

15 Sept 2000  
\_\_\_\_\_  
Date  
Approved for work  
start on 15 Sept 2000  
JW

<b>URS</b>	
Project No.	805169
File Code No.	1.3.b.2
Doc No.	3/3



August 18, 2000

Mr. Paul Peronard  
US EPA  
EPR-SA  
999 18th St, Suite 500  
Denver, CO 80202

Mr. Paul Peronard  
US EPA  
501 Mineral Avenue  
Libby, Montana 59923

Re: **Addendum 5 to Approved Work Plan dated July 28, 2000**  
**Libby Asbestos Site (#8-BC), Libby, Lincoln County, Montana**

Dear Mr. Peronard:

Please find attached, for your review and approval, Addendum No. 5 to the above referenced work plan. URS is planning to begin implementing the revisions to the Appendix E, Traffic Control Plan described in the attached Addendum No. 5 and to begin the hauling of cleaning/demolition materials from the Planer Shop to the disposal level 12 on August 22, 2000. Therefore, please call me with any comments or fax your approval to me by noon on August 21.

Thank you in advance for your immediate attention with this matter. Please call if you have any questions concerning this submittal.

Sincerely,

Jim Stout  
Project Coordinator  
Libby Asbestos Site

cc: Jon Constan, Montana Department of Environmental Quality (3 copies)  
Ken Lund, Holme Roberts & Owen  
Bob Mariam, WR Grace  
David Cleary, WR Grace  
Karen Brown, WR Grace  
Matthew Cohn, US EPA

URS	
Project No.	805169
File Code No.	3.6.9.27
Doc No.	

**ADDENDUM NO. 5**  
**Work Plan – Removal of Asbestos and Vermiculite**  
**at the Export Plant, Libby Asbestos Site**  
**28 July 2000**

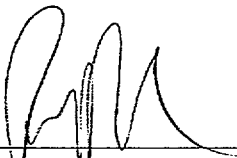
<b>URS</b>	
Project No.	805169
File Code No.	1.3.6.5
Doc No.	10 1/2

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend Appendix E – Traffic Control Plan.

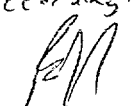
The following items are proposed changes to the current Traffic Control Plan:

1. Calcium chloride, in lieu of magnesium chloride, will be applied to Rainy Creek Road as part of the dust control measures taken for this removal action. The application of calcium chloride is an effective dust control measure which will minimize the amount of water required for dust suppression.
2. Once soil removal activities begin at the Export Plant site, wheel washing of trucks will begin as they leave the Export Plant site per the original plan.
3. The route to the mine has not been altered.
4. The mine decontamination pad will be constructed for wheel washing of exiting trucks at the last turnout exiting the mine road near the "locked gate," rather than adjacent to the well (See revised **Figure E-3**).
5. One flagger at the mine will now provide traffic control for all trucks hauling soil and debris to the mine disposal site. The location of this flagger will be at the mine gate (locked gate). This flagger will be in radio contact with all truck traffic and will control ingress and egress to all traffic within the former Vermiculite Mountain Mine Site during operations. The gate will be locked at other times.
6. Several turnouts have been identified between the mining gate and mine disposal site where trucks can pull over to wait for oncoming traffic, therefore allowing restricted two-way traffic in this portion of the haul route. The turnouts will each be numbered so that a vehicle's location can be monitored. If more than one vehicle is between the mine gate and the mine disposal site, they can be directed by the flagger via radio communications to pull over and wait for the uphill traffic to pass before proceeding, thereby improving the overall flow of trucks through this segment of the haul route.

7. Daily truck count passing the flagger will be maintained.
8. The Traffic Operations Foreman position will be eliminated. The duties of the Traffic Operations Foreman will be assumed by the Construction Supervisor.
9. The revised disposal locations for soil and debris traffic patterns are shown on the revised **Figure E-3**.

  
\_\_\_\_\_  
Signature  
  
PAUL R. LEONARD  
\_\_\_\_\_  
Printed Name of Signer

13 Sept 2000  
\_\_\_\_\_  
Date

This was verbally approved on 18 August 2000,  
GRACE/CAS implemented actions accordingly.  


<b>URS</b>	
Project No.	805169
File Code No.	1.3.6.5
Doc No.	pg 2/2



September 6, 2000

Mr. Paul Peronard  
USEPA  
EPR-SA  
999 18th St, Suite 500  
Denver, CO 80202

Mr. Paul Peronard  
USEPA  
501 Mineral Avenue  
Libby, Montana 59923

Re: **Addendum 6 to Approved Work Plan dated July 28, 2000**  
**Libby Asbestos Site (#8-BC), Libby, Lincoln County, Montana**

Dear Mr. Peronard:

Please find attached, for your review and approval, Addendum No. 6, revising Appendix J, Restoration Plan, in the above referenced work plan.

Thank you in advance for your immediate attention with this matter. Please call if you have any questions concerning this submittal.

Sincerely,

For Jim Stout  
Project Coordinator  
Libby Asbestos Site

cc: Jon Constan, Montana Department of Environmental Quality (3 copies)  
Ken Lund, Holme Roberts & Owen  
Bob Mariam, WR Grace  
David Cleary, WR Grace  
Karen Brown, WR Grace  
Matthew Cohn, US EPA  
Pete Pendrak, URS  
File

Approved  
  
13 Sept 2000

EPA REGION VIII  
INFRASTRUCTURE/8TMS-1  
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**ADDENDUM NO. 6**  
**Work Plan - Removal of Asbestos and Vermiculite**  
**at the Export Plant, Libby Asbestos Site**  
**06 September 2000**

## **1.0 INTRODUCTION**

This addendum to the 28 July 200 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend Appendix J - Disposal Site Restoration Plan. The locations for debris and soil disposal have now been identified. This addendum addresses restoration of the two disposal areas at the mine site following completion of the Export Plant cleanup.

W.R. Grace, Inc. (Grace) plans to dispose of asbestos impacted soil, vermiculite, debris, and building abatement residue generated during decontamination of the Export Plant at the vermiculite mine. Grace currently has an access agreement with the owner of the mine and has cooperated with the regulatory agencies involved in the cleanup actions to select appropriate disposal areas. Placement of the asbestos impacted material and restoration of the disposal areas will be conducted according to the procedures specified within this plan.

The vermiculite mine is located approximately 8 miles to the north and east of the Export Plant as shown on Figure J-1. Since mining operations ceased in 1990 the mine property was reclaimed by Grace and subsequently sold to Kootenai Development Company. Previous restoration activities included regrading operations and planting of native vegetation.

## **2.0 REFERENCE TO OTHER PLANS**

The restoration activities described in this plan are associated with work described in several other plans, as amended, including: Health and Safety Plan (Appendix B); Traffic Control Plan (Appendix E and Addendum No. 5); Dust Control Plan (Appendix F and Addendum No. 5); and Erosion Control Plan (Appendix G). Several activities specified in the plans noted will support the restoration actions as well. The Traffic Control Plan describes the route trucks will use to access the disposal areas and the operations to decontaminate those vehicles. Dust and erosion control measures will be undertaken during the disposal of the



material as described in the respective plans to alleviate dispersion of the materials via wind or water runoff.

All of the disposal activities will be closely monitored and coordinated to insure the safety of the public and contractor personnel and to minimize environmental impacts. Health and safety precautions will be emphasized throughout the disposal and restoration work. Only properly trained and qualified individuals will be assigned to the disposal and site restoration tasks. At a minimum, personnel working at the mine site will have OSHA 40-hour HAZMAT and respirator training. Access to the disposal areas will be restricted to authorized personnel.

### **3.0 MINE SITE RESTORATION TECHNICAL PROTOCOL**

As agreed upon with the appropriate project regulatory representatives (Paul Peronard-EPA; and John Constan-Montana DEQ), two areas at the mine site have been identified for disposal of soil and debris associated with the Export Plant cleanup. The two areas are shown on Figure J-2 and noted as the "Soil Staging" area and the "Planned Debris Disposal" area. Soil excavated from the Export Plant will be staged in an area directly west of a large depression known as the Glory Hole. Cleaning debris and non-salvageable material will be placed in a depression known as the Level 12 Toe, directly west of a large mound of dirt and mined material. Photographs of the selected disposal areas are presented as Figures J-3 through J-6.

#### **3.1 Soil Disposal and Site Restoration**

Up to 16,000 cubic yards of surface soil, gravel, and road base are estimated to be removed from the Export Plant site. The soil will be transported to the mine site in tarp-covered end-dumps and placed in the soil staging area. A dozer will be operated at the soil staging area to manage deposited soil. In addition, dust suppression will be maintained throughout the soil dumping activities using water trucks and hoses.

The staged soil piles will be left in place until all of the removal activities at the Export Plant are complete and all of the debris resulting from the cleanup has been transported to the mine site for disposal. The soil piles will be monitored and moistened as necessary to minimize blowing dust.

The staged soil will be used for two purposes: 1) as final cover for the Planned Debris Disposal area; and 2) as fill for the Glory Hole. URS will place approximately 24 inches of the

soil as a final cover over the Planned Debris Disposal area. The soil will provide a base for revegetation of this area.

The remaining soil and gravel will be used to fill the Glory Hole, eliminating this depression and recontouring the area to match the surrounding grade. This recontouring activity will be completed after appropriate consultation with Montana DEQ and in accordance with the mine site permit requirements as may be amended. The area will be revegetated once filling and grading is complete.

### **3.2 Debris Disposal Area**

Debris from the Export Plant building abatement activities and vermiculite removal will be hauled to the debris disposal area in trucks and placed in a depression on Level 12 near the toe of a small hill as shown on Figure J-2. It is anticipated that most of the debris material from the abatement will be wrapped in plastic or bagged. If necessary to control wind blown litter, periodic soil cover will be pushed over the top of the debris using a dozer operating at the top of the hill. The cover will consist of existing soil scraped by the dozer off the hill above the disposal area. Alternatively, the material will be moistened daily to control wind dispersal.

Scraping the natural material off the top of the hill above the disposal location (at the toe of the hill) will also allow URS to reduce the steep slope of the hill and recontour this area to prevent erosion and ponding of precipitation. Once all of the debris has been hauled and disposed of in this area, the area will be covered with 2 to 3 feet of additional natural material and tracked with the dozer. Soil from the soil staging area will then be brought in and a minimum 12-inch lift will be placed over the disposal area and revegetated.

### **3.3 Revegetation**

Once the final grades have been established and the final soil cover placed, the Glory Hole and the Debris Disposal Area will be hydroseeded using a seed mixture selected in consultation with forest service personnel. The reseeded areas will be inspected weekly throughout the first growing season to ensure that adequate moisture is available for establishing germination and growth. The inspections will also be used to identify potential erosion areas if present so that they can be addressed.

### **3.4 Site Security**

The area used for disposal of the Export Plant cleanup debris will be posted with signs indicating the areal extent of the disposal area. The signs will also indicate the nature of the

disposed material and provide a telephone number for additional information. As necessary a deed restriction will be made for the area of the debris disposal.

#### **4.0 COMPLIANCE WITH STATE SOLID WASTE DISPOSAL REQUIREMENTS**

The potentially applicable requirements for construction, operation, and closure of landfill units in Montana are provided in ARM 17.50.501 to 17.50.540. This section reviews requirements as they may potentially apply to the disposal of the soil and cleanup debris generated at the Export Plant.

##### **4.1 Facility Classification**

The waste generated during the cleanup is considered "construction and demolition waste". Asbestos is not considered to be a hazardous waste under RCRA regulations. The areas at the mine site selected for disposal of the material will not receive any other waste and will not meet the definition of a "municipal solid waste landfill" unit (MSWLF). The debris to be placed in the disposal area at the mine meets the definition of Group III wastes as defined in ARM 17.50.503. Group III wastes include:

"wood wastes and non-water soluble solids. These wastes are characterized by their general inert nature and low potential for adverse environmental impacts. Examples include, but are not limited to, the following:

- Inert solid waste such as unpainted brick, dirt, rock and concrete;
- Clean, untreated, unglued wood materials, brush, unpainted or untreated lumber, and vehicle tires; and
- Industrial mineral wastes which are essentially inert and non-water soluble and do not contain hazardous waste constituents."

It is anticipated that the disposal area would fall within the definition of a Class III or Class IV landfill according to ARM 17.50.504(2)(b) and (c).

##### **4.2 Facility Standards**

The selected disposal locations meet all of the standards for solid waste management facilities identified in ARM 17.50.505. Criteria specified in ARM 17.50.506 pertaining to liners and leachate collection do not apply to the mine site disposal areas since they are not a Class II landfill unit and since there is no opportunity for affecting the uppermost aquifer with the chemicals listed in Table 1 of the regulation. Since the contaminant of concern in the debris and

soils to be disposed is asbestos (non-soluble) and the disposal location is within a vermiculite mine containing extensive deposits of naturally occurring asbestos, there is minimal potential to adversely affect any existing aquifers due to disposal of the material.

#### **4.3 Operation and Maintenance**

The operation and maintenance procedures for the disposal areas will adhere to the applicable requirements for Class III landfills as specified in ARM 17.50.510 and 511. Access to the mine disposal areas will be strictly controlled. No open burning will take place and control of litter will be accomplished through frequent inspections and placement of periodic cover. Although daily cover is not required for Class III and IV landfills, Grace may provide for cover in the debris area using naturally occurring soils from nearby the disposal area if necessary to prevent debris from blowing across the site.

#### **4.4 Closure Requirements**

Closure requirements for Class III and Class IV landfills are specified in ARM 17.50.530(2) and 17.50.530(3) respectively. The requirements for closure of a Class III landfill include:

- Two feet of final cover;
- Grading and seeding to prevent erosion; and
- A deed notation.

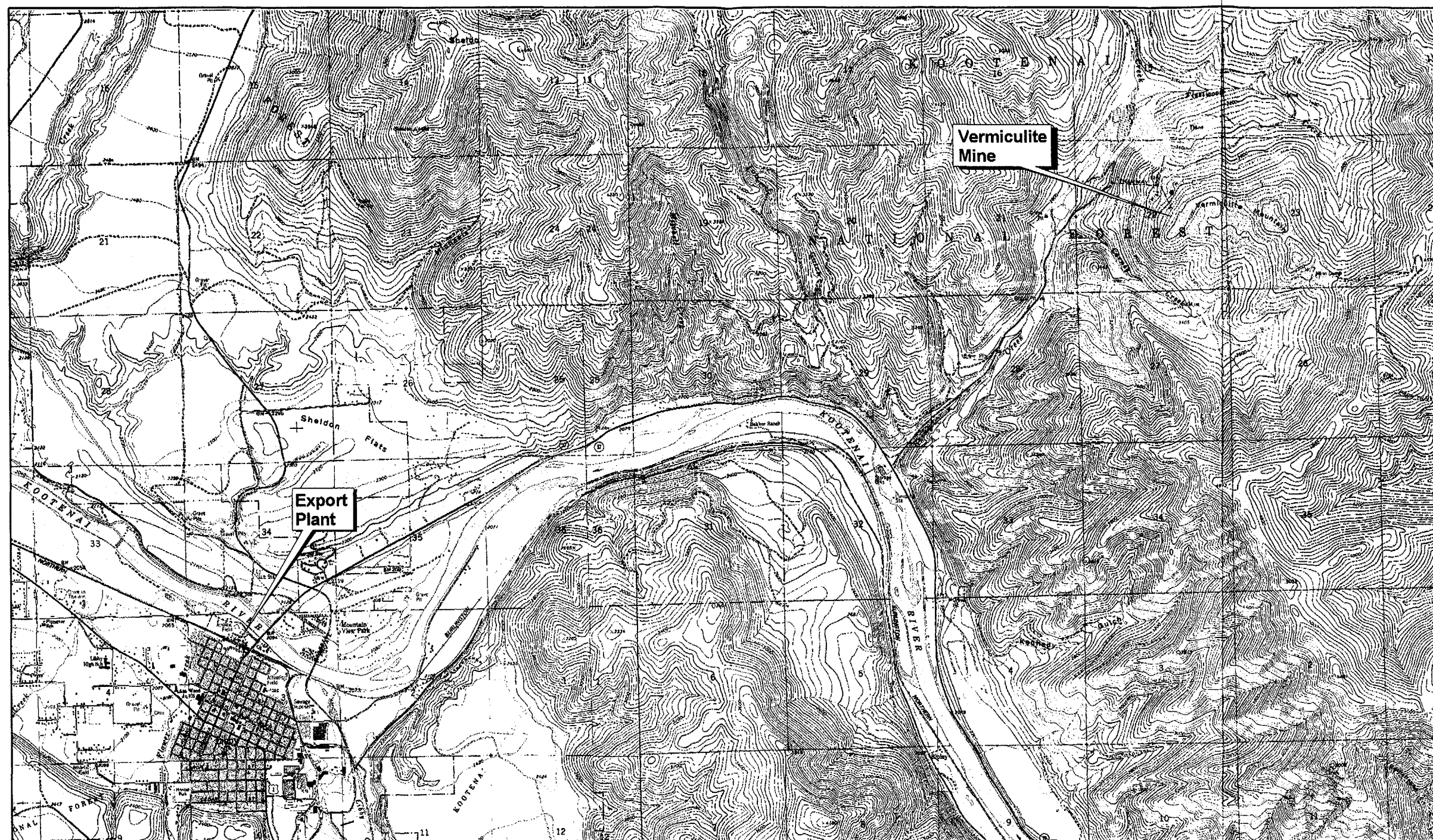
The plan for closing the waste disposal areas will include each of these requirements. Closure requirements for a Class IV landfill include the placement of a final cover designed to minimize infiltration using an 18-inch earthen layer with a permeability of  $10^{-5}$  cm/sec or less and revegetation. Grace plans a 24-inch earthen layer as final cover, although a permeability specification is not planned. As noted previously, the waste that will be placed in the disposal area will not pose a threat to groundwater and the minimal infiltration into the disposal layer is not expected to threaten human health or the environment.

#### **4.5 Post-Closure Care**

The subchapter 17 regulations currently do not contain requirements for post closure care of Class III and IV landfills. Grace plans to conduct periodic inspections of the disposal area until the revegetation efforts are successful.

# Color Chart(s)

The following chart(s) contains color that does not appear on the scanned image(s).



0.5 0 0.5 1 Miles

A horizontal scale bar with markings for 0.5, 0, 0.5, and 1 mile.

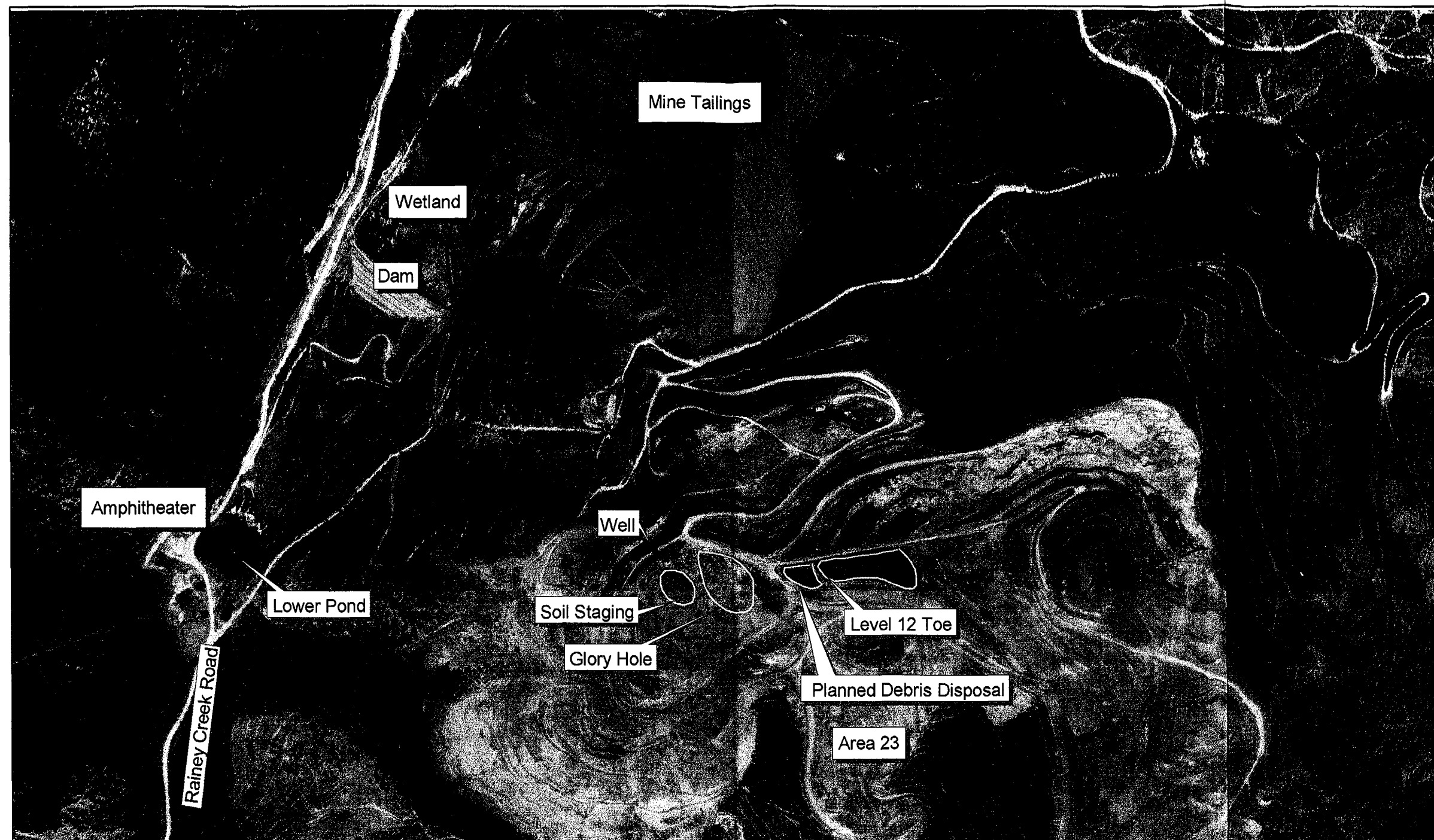
Reference: U.S. Geological Survey,  
Libby and Vermiculite Mountain Quadrangles, Montana  
7.5 Minute Series Topographic Maps

**Figure J-1. Site Locations**

FILE NAME  
libby.apr

DATE  
27 JULY 2000

DR. BY  
JLC



600 0 600 1200 Feet

Reference: U.S. Geological Survey,  
Libby and Vermiculite Mountain Quadrangles, Montana  
7.5 Minute Series Topographic Maps

**Figure J-2. Proposed Soil and  
Debris Disposal  
Locations  
Vermiculite Mine Site  
Libby, Montana**

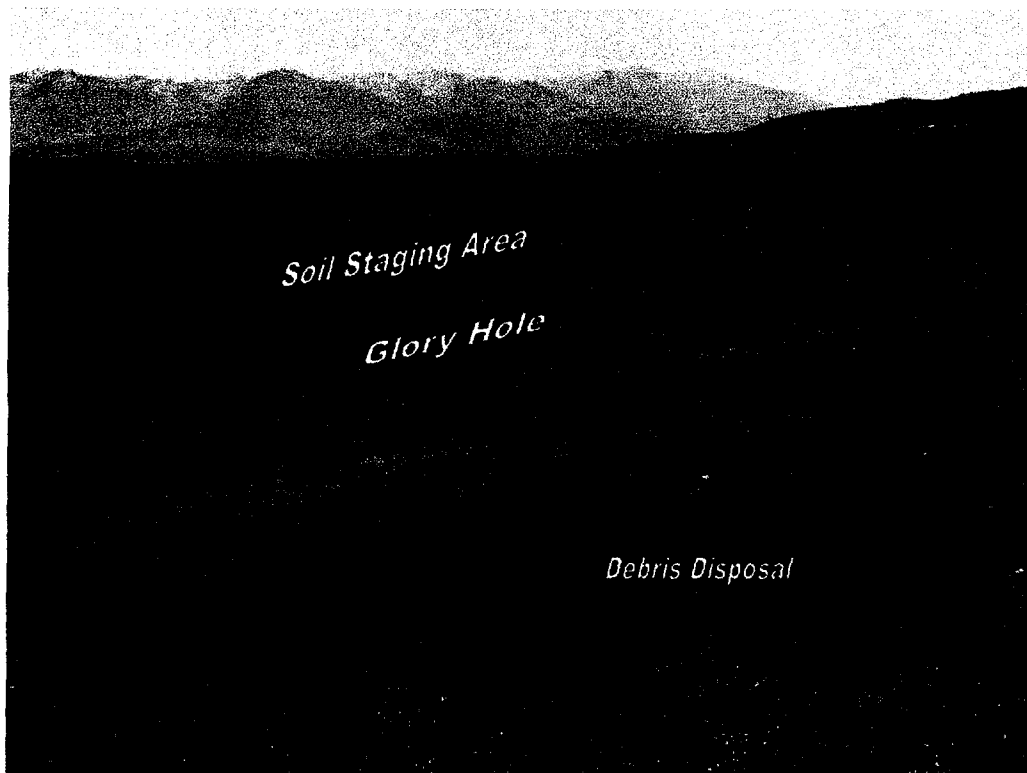
FILE NAME libby.apr	DATE 08/18/00	DR. BY JLC
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# Color Photo(s)

The following photos contain color that does not appear in the scanned images.

To view the actual images please contact the Superfund Record Center at (303) 312-6473.

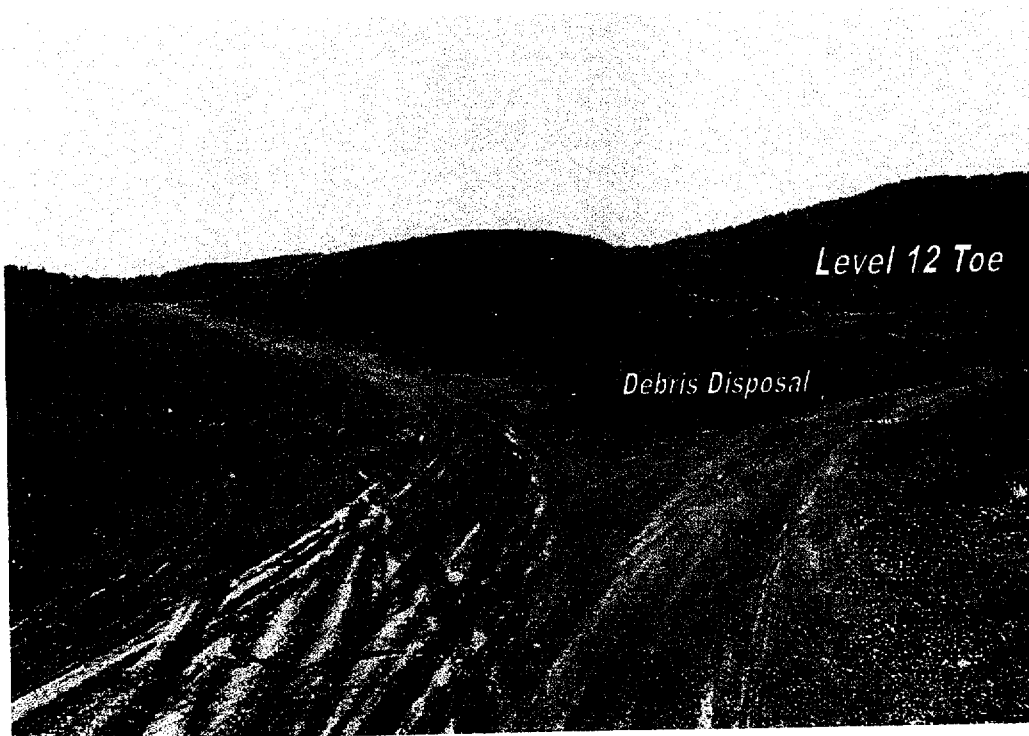




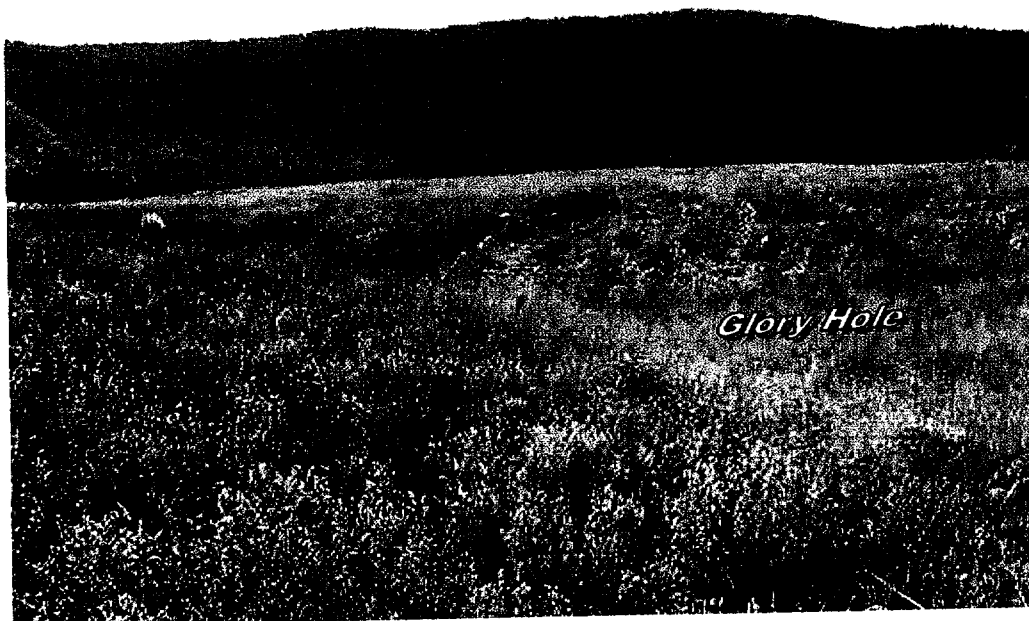
**Figure J-3. View Looking West from Top of Level 12**



**Figure J-4. View of Debris Disposal Location from Northeast**



**Figure J-5. View of Debris Disposal Location from East**



**Figure J-6. View of Glory Hole**



September 6, 2000

Mr. Paul Peronard  
USEPA  
EPR-SA  
999 18th St, Suite 500  
Denver, CO 80202

EPA REGION VIII  
INFRASTRUCTURE/STMS-1  
00 AUG 30 PM 3:31

Mr. Paul Peronard  
USEPA  
501 Mineral Avenue  
Libby, Montana 59923

Re: **Addendum 6 to Approved Work Plan dated July 28, 2000**  
**Libby Asbestos Site (#8-BC), Libby, Lincoln County, Montana**

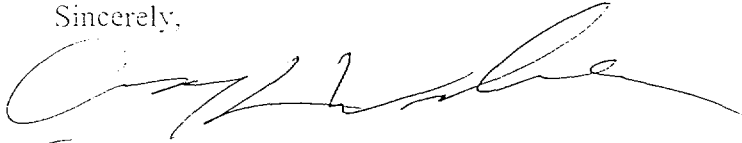
Dear Mr. Peronard:

✓ file no. 1.3.6-4

Please find attached, for your review and approval, Addendum No. 6, revising Appendix J, Restoration Plan, in the above referenced work plan.

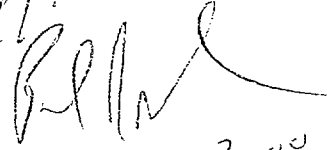
Thank you in advance for your immediate attention with this matter. Please call if you have any questions concerning this submittal.

Sincerely,

  
For ✓ Jim Stout

Project Coordinator  
Libby Asbestos Site

cc: Jon Constan, Montana Department of Environmental Quality (3 copies)  
Ken Lund, Holme Roberts & Owen  
Bob Mariam, WR Grace  
David Cleary, WR Grace  
Karen Brown, WR Grace  
Matthew Cohn, US EPA  
Pete Pendrak, URS  
File

Approved  
  
13 Sept 2000



**ADDENDUM NO. 6****Work Plan - Removal of Asbestos and Vermiculite****at the Export Plant, Libby Asbestos Site****06 September 2000****URS**Project No. 805169File Code No. 1.3.5.4

Doc No. \_\_\_\_\_

**1.0 INTRODUCTION**

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend Appendix J - Disposal Site Restoration Plan. The locations for debris and soil disposal have now been identified. This addendum addresses restoration of the two disposal areas at the mine site following completion of the Export Plant cleanup.

W.R. Grace, Inc. (Grace) plans to dispose of asbestos impacted soil, vermiculite, debris, and building abatement residue generated during decontamination of the Export Plant at the vermiculite mine. Grace currently has an access agreement with the owner of the mine and has cooperated with the regulatory agencies involved in the cleanup actions to select appropriate disposal areas. Placement of the asbestos impacted material and restoration of the disposal areas will be conducted according to the procedures specified within this plan.

The vermiculite mine is located approximately 8 miles to the north and east of the Export Plant as shown on Figure J-1. Since mining operations ceased in 1990 the mine property was reclaimed by Grace and subsequently sold to Kootenai Development Company. Previous restoration activities included regrading operations and planting of native vegetation.

**2.0 REFERENCE TO OTHER PLANS**

The restoration activities described in this plan are associated with work described in several other plans, as amended, including: Health and Safety Plan (Appendix B); Traffic Control Plan (Appendix E and Addendum No. 5); Dust Control Plan (Appendix F and Addendum No. 5); and Erosion Control Plan (Appendix G). Several activities specified in the plans noted will support the restoration actions as well. The Traffic Control Plan describes the route trucks will use to access the disposal areas and the operations to decontaminate those vehicles. Dust and erosion control measures will be undertaken during the disposal of the

material as described in the respective plans to alleviate dispersion of the materials via wind or water runoff.

All of the disposal activities will be closely monitored and coordinated to insure the safety of the public and contractor personnel and to minimize environmental impacts. Health and safety precautions will be emphasized throughout the disposal and restoration work. Only properly trained and qualified individuals will be assigned to the disposal and site restoration tasks. At a minimum, personnel working at the mine site will have OSHA 40-hour HAZMAT and respirator training. Access to the disposal areas will be restricted to authorized personnel.

### **3.0 MINE SITE RESTORATION TECHNICAL PROTOCOL**

As agreed upon with the appropriate project regulatory representatives (Paul Peronard-EPA; and John Constan-Montana DEQ), two areas at the mine site have been identified for disposal of soil and debris associated with the Export Plant cleanup. The two areas are shown on Figure J-2 and noted as the "Soil Staging" area and the "Planned Debris Disposal" area. Soil excavated from the Export Plant will be staged in an area directly west of a large depression known as the Glory Hole. Cleaning debris and non-salvageable material will be placed in a depression known as the Level 12 Toe, directly west of a large mound of dirt and mined material. Photographs of the selected disposal areas are presented as Figures J-3 through J-6.

#### **3.1 Soil Disposal and Site Restoration**

Up to 16,000 cubic yards of surface soil, gravel, and road base are estimated to be removed from the Export Plant site. The soil will be transported to the mine site in tarp-covered end-dumps and placed in the soil staging area. A dozer will be operated at the soil staging area to manage deposited soil. In addition, dust suppression will be maintained throughout the soil dumping activities using water trucks and hoses.

The staged soil piles will be left in place until all of the removal activities at the Export Plant are complete and all of the debris resulting from the cleanup has been transported to the mine site for disposal. The soil piles will be monitored and moistened as necessary to minimize blowing dust.

The staged soil will be used for two purposes: 1) as final cover for the Planned Debris Disposal area; and 2) as fill for the Glory Hole. URS will place approximately 24 inches of the

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File Code No.	1.3.5.4

soil as a final cover over the Planned Debris Disposal area. The soil will provide a base for revegetation of this area.

The remaining soil and gravel will be used to fill the Glory Hole, eliminating this depression and recontouring the area to match the surrounding grade. This recontouring activity will be completed after appropriate consultation with Montana DEQ and in accordance with the mine site permit requirements as may be amended. The area will be revegetated once filling and grading is complete.

### **3.2 Debris Disposal Area**

Debris from the Export Plant building abatement activities and vermiculite removal will be hauled to the debris disposal area in trucks and placed in a depression on Level 12 near the toe of a small hill as shown on Figure J-2. It is anticipated that most of the debris material from the abatement will be wrapped in plastic or bagged. If necessary to control wind blown litter, periodic soil cover will be pushed over the top of the debris using a dozer operating at the top of the hill. The cover will consist of existing soil scraped by the dozer off the hill above the disposal area. Alternatively, the material will be moistened daily to control wind dispersal.

Scraping the natural material off the top of the hill above the disposal location (at the toe of the hill) will also allow URS to reduce the steep slope of the hill and recontour this area to prevent erosion and ponding of precipitation. Once all of the debris has been hauled and disposed of in this area, the area will be covered with 2 to 3 feet of additional natural material and tracked with the dozer. Soil from the soil staging area will then be brought in and a minimum 12-inch lift will be placed over the disposal area and revegetated.

### **3.3 Revegetation**

Once the final grades have been established and the final soil cover placed, the Glory Hole and the Debris Disposal Area will be hydroseeded using a seed mixture selected in consultation with forest service personnel. The reseeded areas will be inspected weekly throughout the first growing season to ensure that adequate moisture is available for establishing germination and growth. The inspections will also be used to identify potential erosion areas if present so that they can be addressed.

### **3.4 Site Security**

The area used for disposal of the Export Plant cleanup debris will be posted with signs indicating the areal extent of the disposal area. The signs will also indicate the nature of the

Project No. 805169

File Code No. 1.3.b.4

disposed material and provide a telephone number for additional information. As necessary a deed restriction will be made for the area of the debris disposal.

#### 4.0 COMPLIANCE WITH STATE SOLID WASTE DISPOSAL REQUIREMENTS

The potentially applicable requirements for construction, operation, and closure of landfill units in Montana are provided in ARM 17.50.501 to 17.50.540. This section reviews requirements as they may potentially apply to the disposal of the soil and cleanup debris generated at the Export Plant.

##### 4.1 Facility Classification

The waste generated during the cleanup is considered "construction and demolition waste". Asbestos is not considered to be a hazardous waste under RCRA regulations. The areas at the mine site selected for disposal of the material will not receive any other waste and will not meet the definition of a "municipal solid waste landfill" unit (MSWLF). The debris to be placed in the disposal area at the mine meets the definition of Group III wastes as defined in ARM 17.50.503. Group III wastes include:

"wood wastes and non-water soluble solids. These wastes are characterized by their general inert nature and low potential for adverse environmental impacts. Examples include, but are not limited to, the following:

- Inert solid waste such as unpainted brick, dirt, rock and concrete;
- Clean, untreated, unglued wood materials, brush, unpainted or untreated lumber, and vehicle tires; and
- Industrial mineral wastes which are essentially inert and non-water soluble and do not contain hazardous waste constituents."

It is anticipated that the disposal area would fall within the definition of a Class III or Class IV landfill according to ARM 17.50.504(2)(b) and (c).

##### 4.2 Facility Standards

The selected disposal locations meet all of the standards for solid waste management facilities identified in ARM 17.50.505. Criteria specified in ARM 17.50.506 pertaining to liners and leachate collection do not apply to the mine site disposal areas since they are not a Class II landfill unit and since there is no opportunity for affecting the uppermost aquifer with the chemicals listed in Table 1 of the regulation. Since the contaminant of concern in the debris and

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Project No.	805169
File Code No.	1.3.6.4

soils to be disposed is asbestos (non-soluble) and the disposal location is within a vermiculite mine containing extensive deposits of naturally occurring asbestos, there is minimal potential to adversely affect any existing aquifers due to disposal of the material.

#### **4.3 Operation and Maintenance**

The operation and maintenance procedures for the disposal areas will adhere to the applicable requirements for Class III landfills as specified in ARM 17.50.510 and 511. Access to the mine disposal areas will be strictly controlled. No open burning will take place and control of litter will be accomplished through frequent inspections and placement of periodic cover. Although daily cover is not required for Class III and IV landfills, Grace may provide for cover in the debris area using naturally occurring soils from nearby the disposal area if necessary to prevent debris from blowing across the site.

#### **4.4 Closure Requirements**

Closure requirements for Class III and Class IV landfills are specified in ARM 17.50.530(2) and 17.50.530(3) respectively. The requirements for closure of a Class III landfill include:

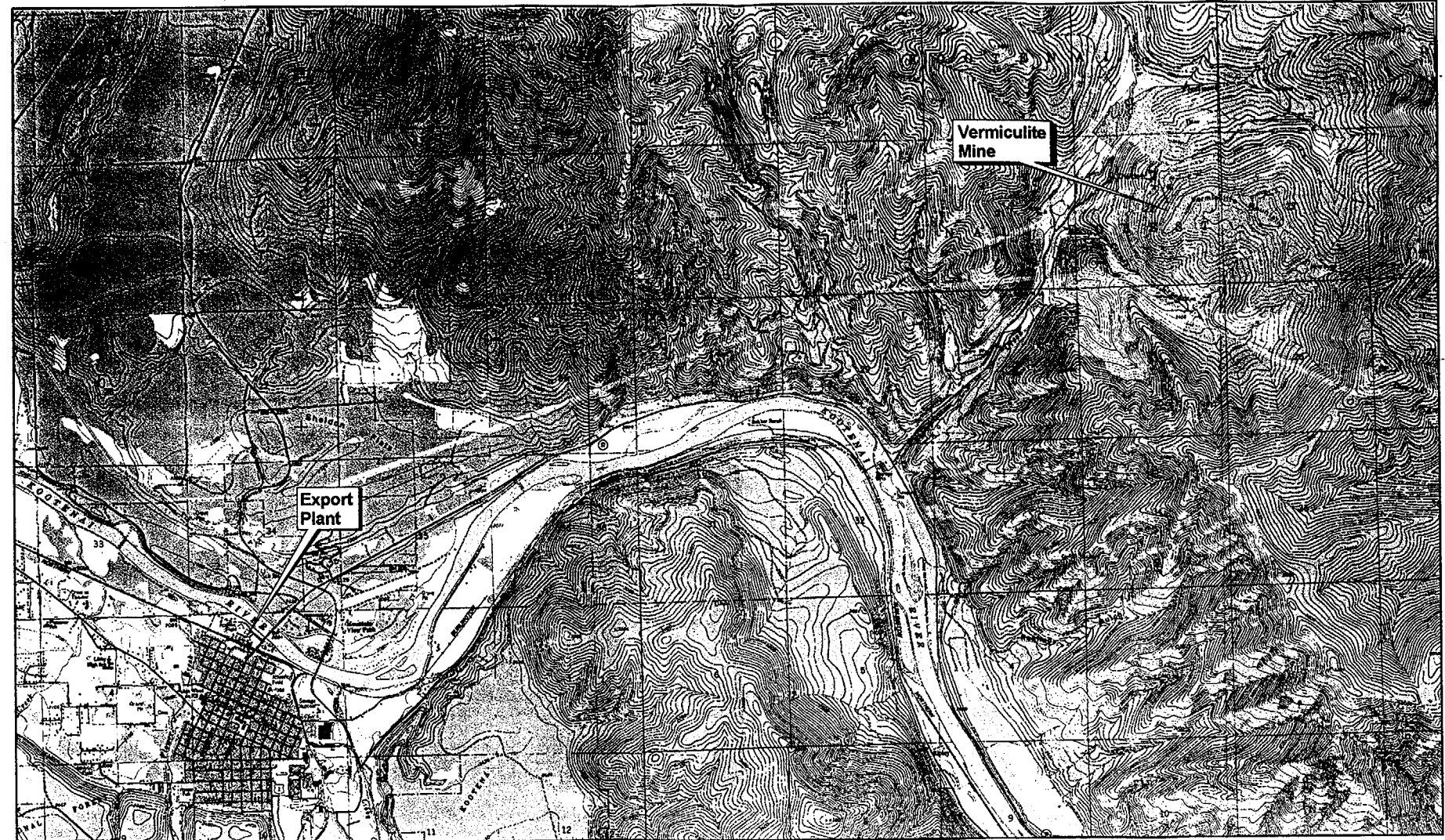
- Two feet of final cover;
- Grading and seeding to prevent erosion; and
- A deed notation.

The plan for closing the waste disposal areas will include each of these requirements. Closure requirements for a Class IV landfill include the placement of a final cover designed to minimize infiltration using an 18-inch earthen layer with a permeability of  $10^{-5}$  cm/sec or less and revegetation. Grace plans a 24-inch earthen layer as final cover, although a permeability specification is not planned. As noted previously, the waste that will be placed in the disposal area will not pose a threat to groundwater and the minimal infiltration into the disposal layer is not expected to threaten human health or the environment.

#### **4.5 Post-Closure Care**

The subchapter 17 regulations currently do not contain requirements for post closure care of Class III and IV landfills. Grace plans to conduct periodic inspections of the disposal area until the revegetation efforts are successful.



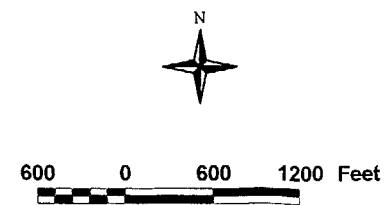
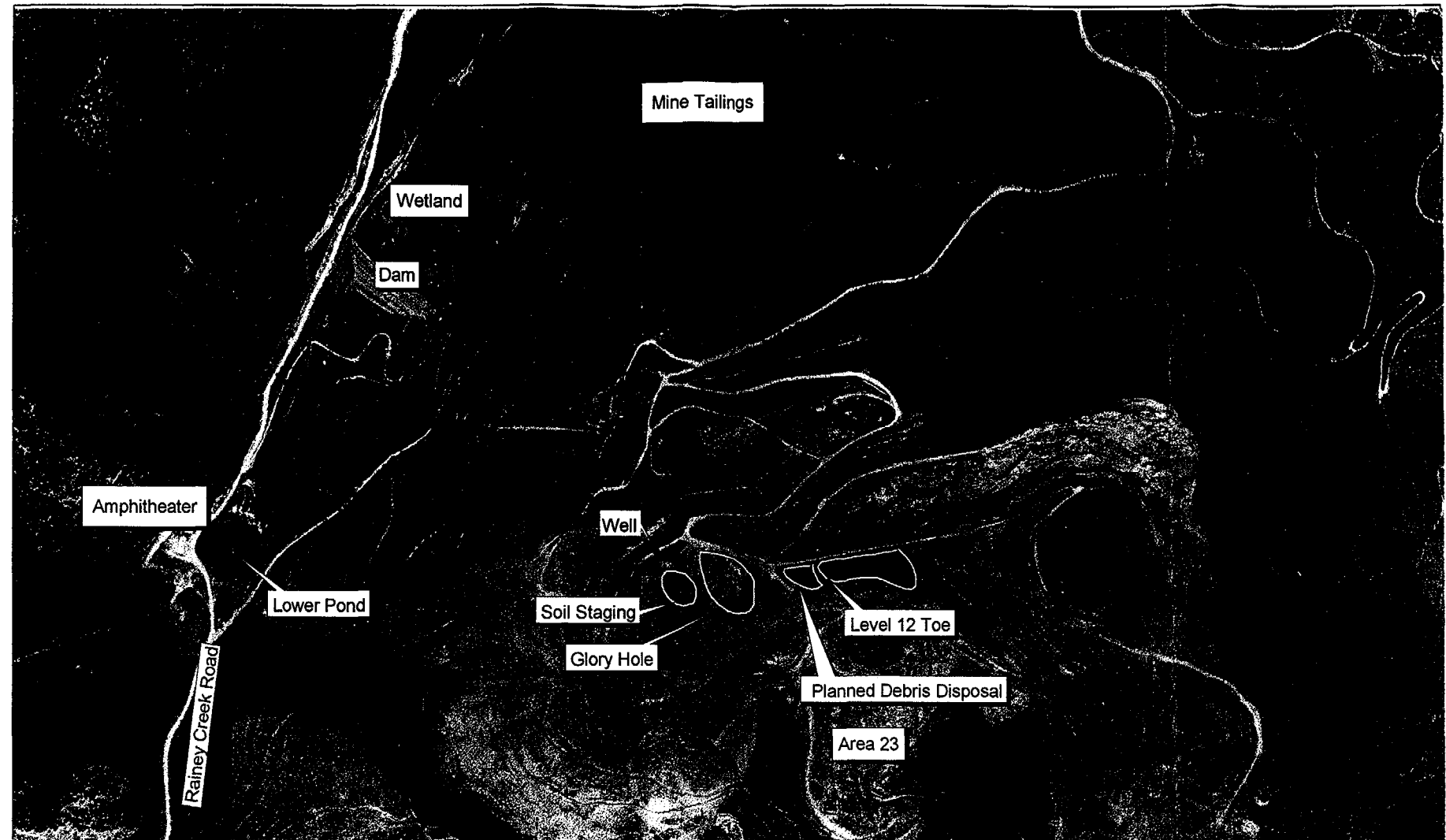


0.5 0 0.5 1 Miles

Reference: U.S. Geological Survey,  
Libby and Vermiculite Mountain Quadrangles, Montana  
7.5 Minute Series Topographic Maps

**Figure J-1. Site Locations**

FILE NAME	DATE	DR. BY
libby.apr	27 JULY 2000	JLC



Reference: U.S. Geological Survey,  
Libby and Vermiculite Mountain Quadrangles, Montana  
7.5 Minute Series Topographic Maps

**Figure J-2. Proposed Soil and  
Debris Disposal  
Locations  
Vermiculite Mine Site  
Libby, Montana**

FILE NAME libby.apr	DATE 08/18/00	DR. BY JLC
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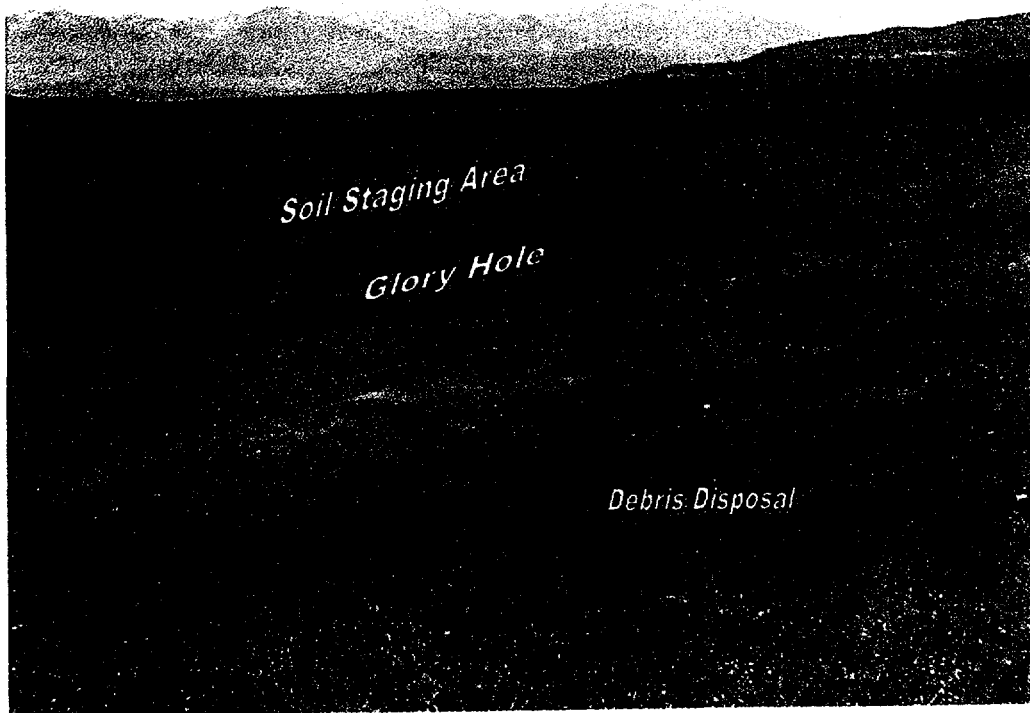


Figure J-3. View Looking West from Top of Level 12

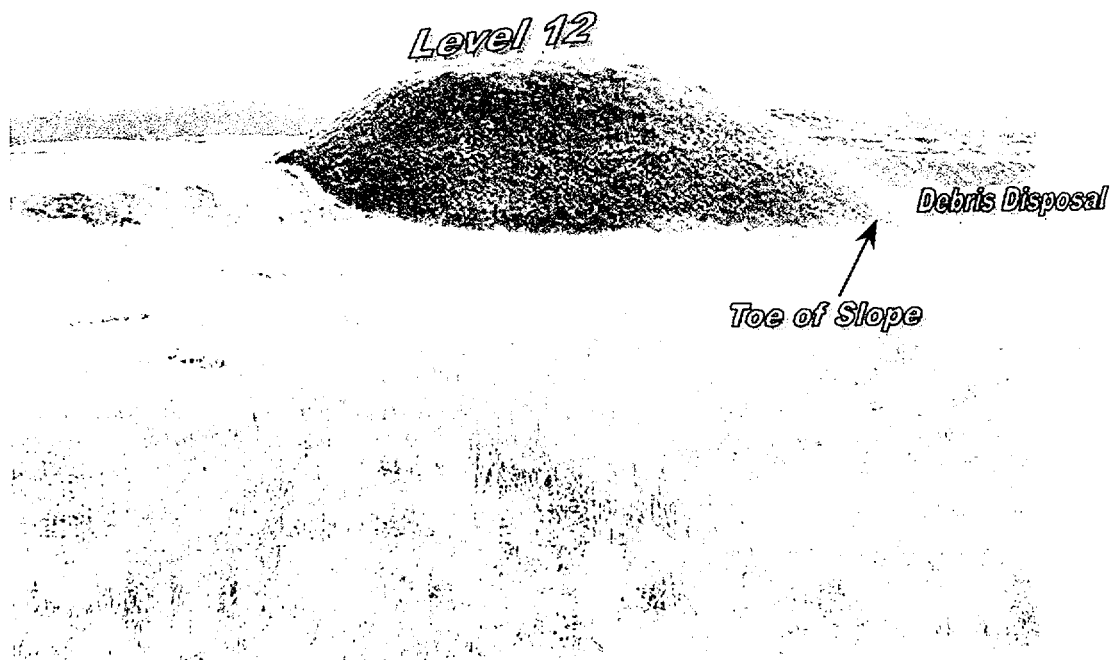


Figure J-4. View of Debris Disposal Location from Northeast

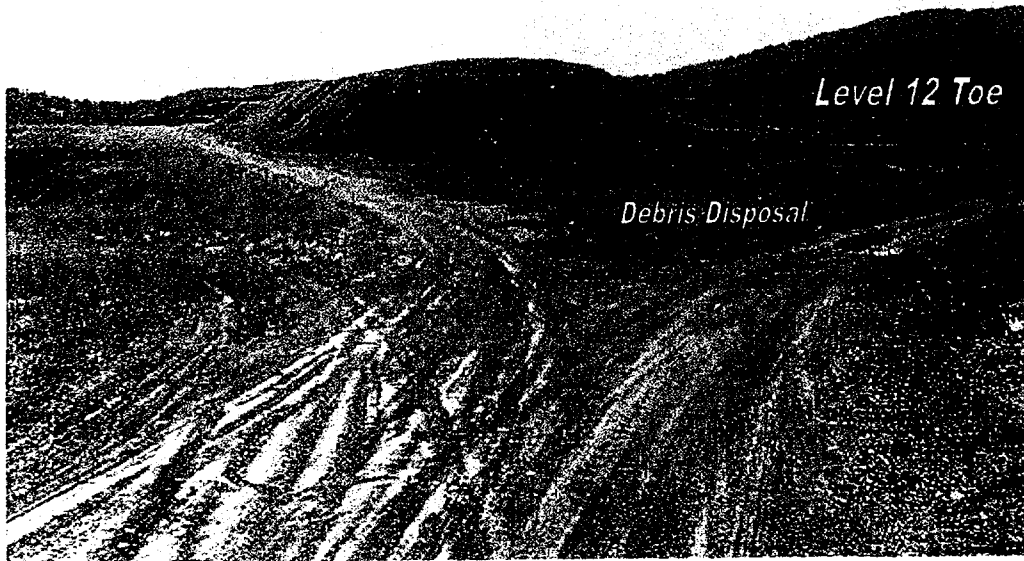


Figure J-5. View of Debris Disposal Location from East



Figure J-6. View of Glory Hole



November 02, 2000

US EPA Region VIII  
Attn. Mr. Paul Peronard, 8EPR-EP  
On-Scene Coordinator  
999 18th Street, Suite 300  
Denver, CO. 80202-2466

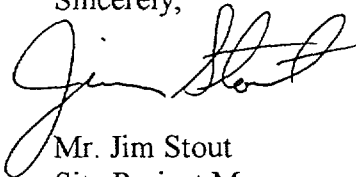
RE: US EPA Region VIII Unilateral Administrative Order (UAO) No. CERCLA-8-2000-10, Libby, Mt. Export Plant Removal Action, Addendum No. 9

Dear Mr. Peronard:

Please find attached Addendum No. 9 to the above referenced UAO for your review and approval. Thank you in advance for your immediate attention with this matter.

Please call if you have any questions concerning this submittal.

Sincerely,



Mr. Jim Stout  
Site Project Manager

Attachment

cc:	Ken Lund, Esq.	Holme, Roberts & Owen
	Karen Brown	W. R. Grace
	Ray Lidstrom	URS

<b>URS</b>	
Project No.	805169
File Code No.	1.3.5.7
Doc No.	pg 1/3

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FROM : WR GRACE

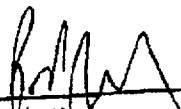
FAX NO. : 4062933964

Nov. 06 2000 05:32PM P2

**ADDENDUM NO. 9**  
**Work Plan - Removal of Asbestos and Vermiculite at the Libby Asbestos Site**  
**02 November 2000**

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to reduce the size of the current Exclusion Zone (see Figure 1 attached). The reduced size of the exclusion zone will allow Millwork West to operate in the Planer Building by November 13, 2000. URS will have perimeter air monitoring samples taken daily at three locations (see Figure 1 attached) along the new west boundary of the Exclusion Zone.

When the planer run begins, URS will excavate soils at the east end of the property. URS will reduce perimeter air monitoring along the new west boundary to one location when the planer run has been completed.

  
Signature

PAUL R. PERONARD  
Printed Name of Signature

11/7/00  
Date

<b>URS</b>	
Project No.	805168
File Code No.	1.3.5.7
Doc No.	87 2/3

# FIGURE 1 REDUCED EXCLUSION ZONE-EXPORT PLANT

KOOTENAI RIVER

2 NEW PERIMETER  
MONITORING LOCATIONS

11-2-00

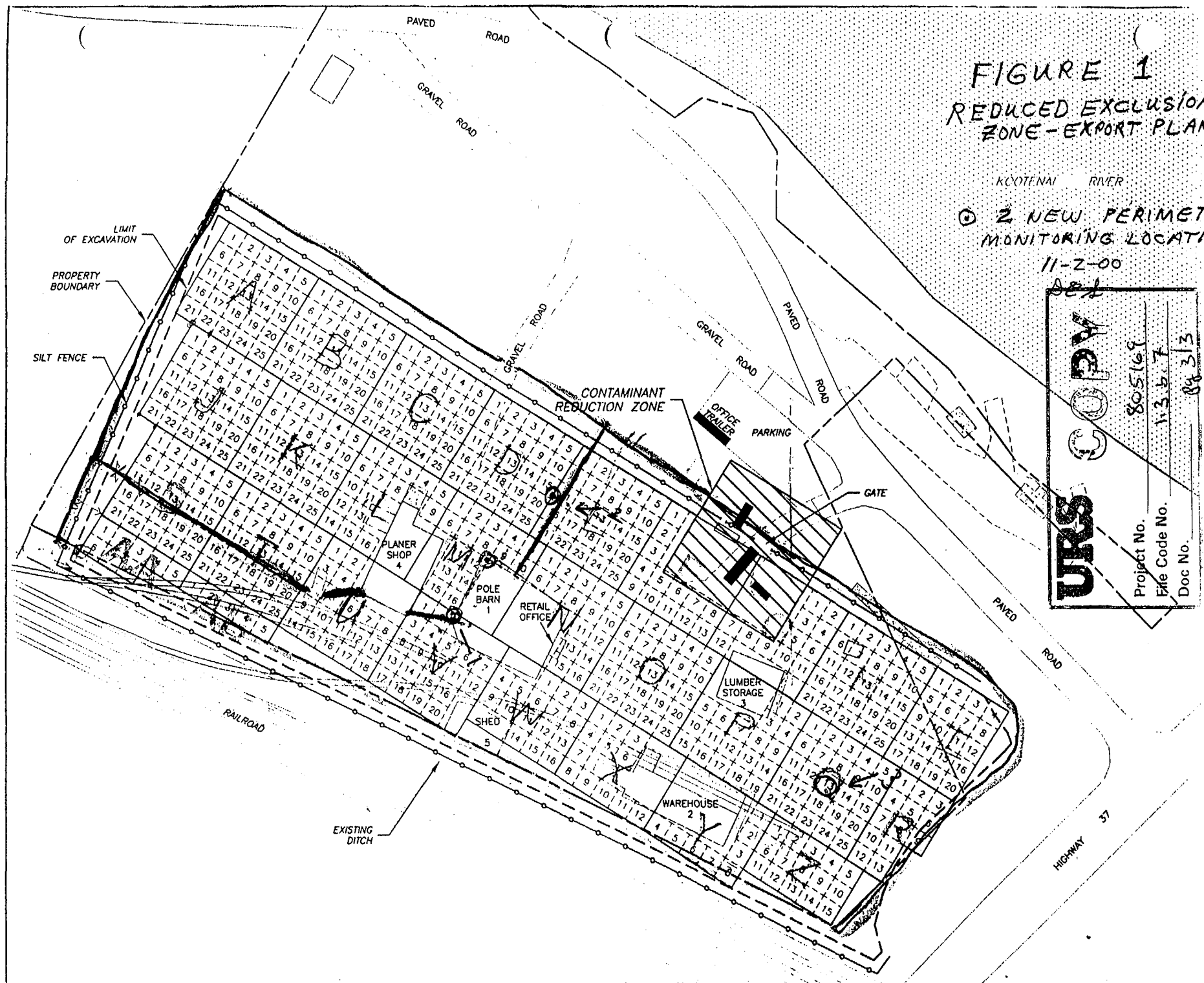
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**DRS**

Project No. 805169

File Code No. 11347

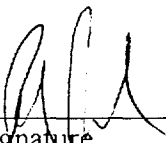
Doc No. 84313



**ADDENDUM NO. 10**  
**Work Plan – Removal of Asbestos and Vermiculite at the Libby Asbestos Site**  
**07 November 2000**

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to amend Task 15 – Backfill and Compaction. The following items are proposed changes to the current Task 15 – Backfill and Compaction (per Jim Stout – URS and Paul Peronard – USEPA, November 7, 2000 discussion):

- Backfill material to be used for the Export Plant restoration will originate from the Plum Creek gravel pit as per USEPA approval.
- Backfill material at the Export Plant site will meet ninety percent compaction requirements based on visual inspection per USEPA by wheel rolling with heavy construction equipment.

  
\_\_\_\_\_  
Signature

12/1/2000  
\_\_\_\_\_  
Date

Paul R. Peronard  
\_\_\_\_\_  
Printed Name

*Note: Also need to ensure grading/compaction allows for drainage away from building.*

<b>URS</b>	
Project No.	805169
File Code No.	1.3.5.9
Doc No.	





November 20, 2000

Mr. Paul Peronard  
US EPA  
EPR-SA  
999 18th St, Suite 500  
Denver, CO 80202

Mr. Paul Peronard  
US EPA  
501 Mineral Avenue  
Libby, Montana 59923

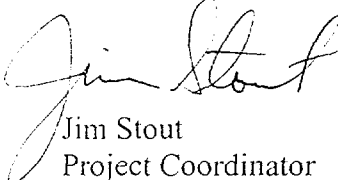
Re: **US EPA Region VIII Unilateral Administrative Order (UAO) No. CERCLA-8-2000-10, Libby, Montana Export Plant Removal Action, Addendum No. 11**

Dear Mr. Peronard:

Please find attached Addendum No. 11 to the above referenced UAO for your review and approval.

Thank you in advance for your immediate attention with this matter. Please call if you have any questions concerning this submittal.

Sincerely,



Jim Stout  
Project Coordinator  
Libby Asbestos Site

JS/nm

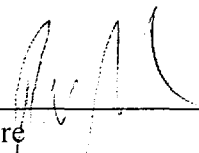
cc: Ken Lund, Holme Roberts & Owen  
Bob Mariam, WR Grace  
David Cleary, WR Grace  
Karen Brown, WR Grace  
Jon Constan, Montana Department of Environmental Quality

Ray Lidstrom, URS  
File  
Matthew Cohn, US EPA

<b>URS</b>	<b>ORIGINAL</b>
Date	805169
File Code No.	1.3.5.8
Doc No.	1/3

**ADDENDUM NO. 11**  
**Work Plan – Removal of Asbestos and Vermiculite**  
**at the Export Plant, Libby Asbestos Site**  
**20 November 2000**

This addendum to the 28 July 2000 Work Plan for the removal of asbestos and vermiculite at the Libby Asbestos Site is issued to reduce the size of the current Exclusion Zone (see Figure 1 attached). The reduced size of the exclusion zone will allow backfill to start on the east end of the Export Plant. URS will have perimeter air monitoring samples taken daily at three locations (see Figure 1 attached) along the new west boundary of the Exclusion Zone.

  
\_\_\_\_\_  
Signature

11/21/2000  
\_\_\_\_\_  
Date

PAUL R. PERKINS  
\_\_\_\_\_  
Printed Name of Signature

